



## THE U.S. PATENT AND TRADEMARK OFFICE

September 26, 2002

Applicants: Tsutomu SHIKADA et al

For: MANUFACTURING METHOD OF HYDROGEN AND SYNTHESIS GAS

Serial No.: 10/015 879 Group: 1754

Confirmation No.: 4687

Filed: October 30, 2001 Examiner: Unknown RECEIVED

Atty. Docket No.: Tanaka Case 15A

OCT 0 3 2002

Assistant Commissioner for Patents Washington, DC 20231

TC 1700

## SECOND AMENDMENT BEFORE FIRST OFFICE ACTION

Sir:

Prior to issuance of the first Office Action in the above-identified application, kindly enter the following:

## IN THE CLAIMS

Please amend Claims 20 and 24 as shown below. A marked-up copy of the amended claims is enclosed.

- 20. (Amended) A system for producing a synthesis gas comprising means for contacting a mixed gas comprising dimethyl ether and one of water vapor and carbon dioxide gas with a first catalyst and a second catalyst comprising palladium, iridium, platinum or rhodium as an active component.
- 24. (Amended) A system for producing hydrogen gas comprising means for contacting a mixed gas comprising dimethyl ether and carbon dioxide gas with a first catalyst and a second catalyst comprising copper, iron, cobalt, palladium, iridium, platinum, rhodium or nickel, in a form of an oxide or sulfide, as an active component.

Please add new Claim 29 as follows.

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Assistant Commissioner for Patents Assistant, DC 20231

## FIRST CLASS MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington DC 20231, on September 26, 2002.

Terryerce F. Chapman

TFC/smd

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Correspondence: Second Amendment Before First Office Action

dated September 26, 2002

including enclosures listed thereon

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